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(54) Arrangements for detachably holding a parking meter to a pole

(57) In an arrangement for detachably holding a parking meter (3, 60) to the top of a pole (2), an intermediate member (1) is fixed to the pole and has a first cylinder (13) with bayonet slots (14) for extending up through a hole (31) in the base (32) of the meter housing (3). The meter housing (3) has a second cylinder (33) for surrounding the first cylinder (13) and having a bayonet pin (34). The two cylinders (13, 33) have openings (15, 35, 36) aligned when the bayonet fitting is fastened so as to accommodate a securing pin (50). A lockable meter cover (60) has a portion (61) which clamps a handle (51) on the securing pin (50) inside the meter. Thus the meter is removable from the pole by unlocking the cover (60) to enable manual withdrawal of the securing pin (50) followed by rotation of the meter to undo the bayonet fitting.

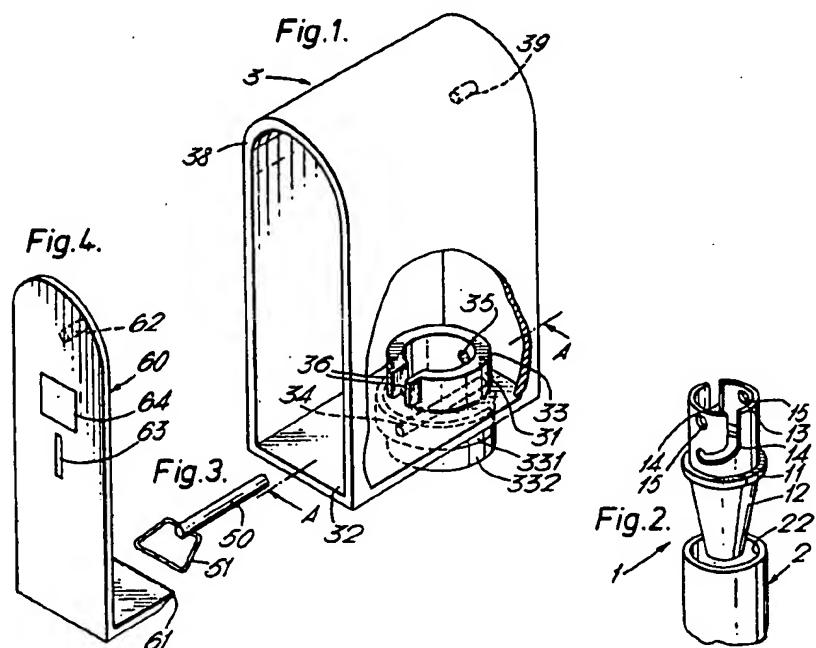


Fig.1.

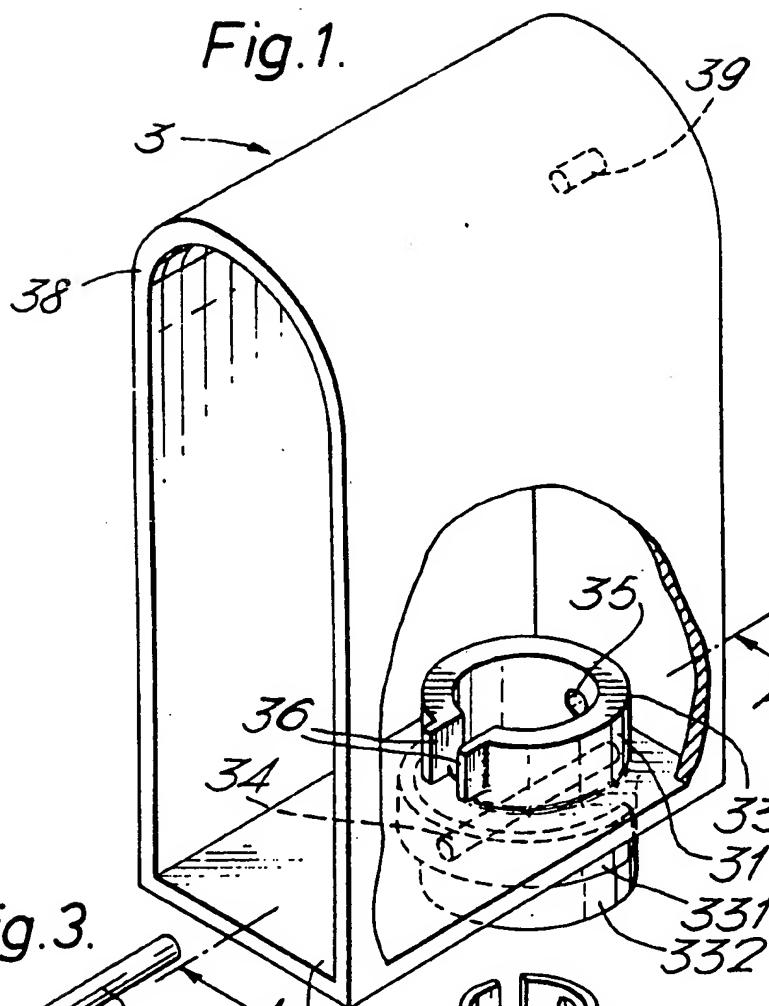


Fig.4.

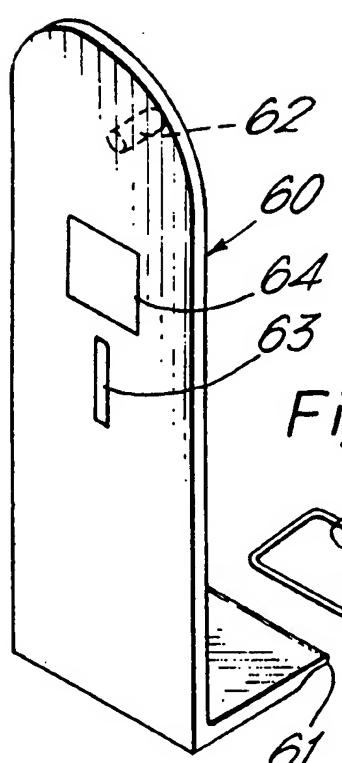


Fig.3.

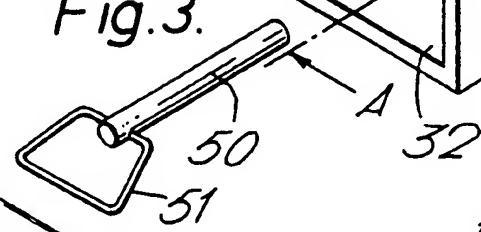


Fig.2.

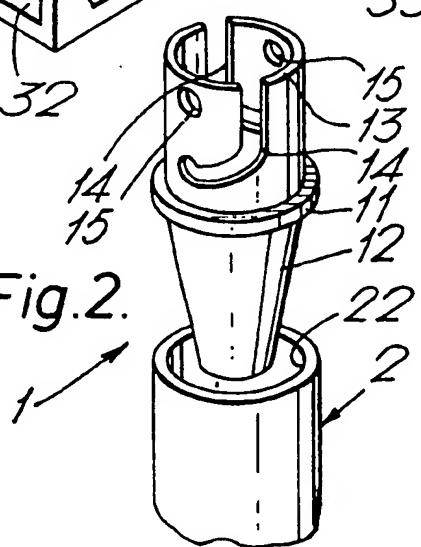
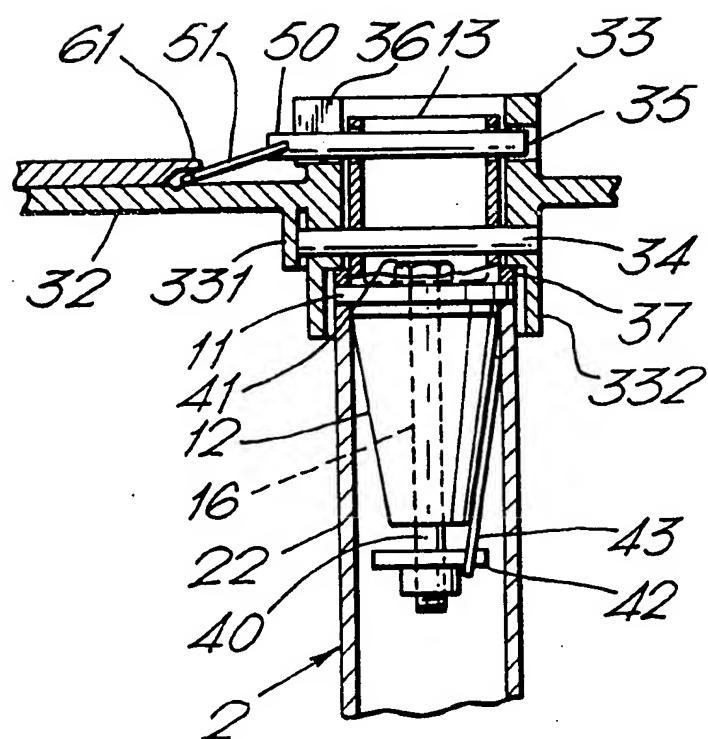


Fig.5.



SPECIFICATION

Arrangements for detachably holding a parking meter to a pole

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This invention relates to arrangements for detachably holding a parking meter to a pole.

In known arrangements for this purpose the parking meter has a portion integral with its base which is 10 detachably fixed to the pole by a bolt accessible inside the meter when a lockable cover of the meter is removed. Fastening and unfastening this bolt for fixing a meter to the pole or removing it for maintenance is time consuming and laborious in 15 out-of-doors conditions.

An object of this invention is to provide an arrangement by which the meter can quickly and easily be fixed to and removed from the pole.

According to the invention there is provided an 20 arrangement for detachably holding a parking meter to the top of a pole, in which an intermediate fixing member has a lower portion for fixing to the pole and an upper portion in the form of a first hollow cylinder for extending through a hole in the base of the parking 25 meter and having slots of a bayonet fitting, in which the parking meter has a second hollow cylinder around said hole in the base for surrounding said first cylinder and having bayonet pin means for fitting in said slots, in which the two cylinders each have 30 opposed openings which are aligned above the base when the bayonet fitting is fastened such that a securing member can extend through the aligned openings, and in which a lockable cover of the meter has a portion for extending into the meter to hold the 35 securing member so that the securing member is manually removable to permit the bayonet fitting to be unfastened and the meter to be detached from the pole when the cover is unlocked and removed.

In the arrangement just described, the second 40 cylinder may occupy a major portion of the width of the meter, said opposed openings being aligned along the length of the meter when the bayonet fitting is fastened, a handle on the securing member extending towards one end of the meter to be held by the 45 lockable cover which is an end cover at that end.

In the arrangement as described in either of the two previous paragraphs, the intermediate fixing member may have a flange between said upper and lower portions for extending across the top end of the pole, 50 the lower portion being adapted to extend into a hollow top portion of the pole and to be clamped to the inside of the pole.

In the arrangement described in the previous 55 paragraph, the lower portion of the intermediate fixing member may have a taper away from the flange, with a hole extending through the flange and the length of said lower portion for locating a bolt with its head on top of the flange and its shank protruding through the lower end of said lower portion, the first 60 hollow cylinder providing access to the bolt head, and a nut for location on the protruding shank of the bolt locating leaves which extend up into the space

between the taper and the inside surface of the pole, such that when the bolt is tightened the leaves are 65 cammed by the taper into a narrowing space between the taper and the inside surface of the pole until the taper is clamped to the pole.

An embodiment of the invention will now be described with reference to the accompanying drawing, in which:

Figure 1 shows a perspective view from one side and the front of the main housing of a parking meter with the lower part of the side broken away to show one part of a two-part bayonet fitting integral with the 75 base of the housing,

Figures 2, 3 and 4 show the same view in exploded relationship with Figure 1 of the top of a pole, and an intermediate fixing member including the other part of the bayonet fitting, a securing pin and handle, and a 80 front end cover of the meter housing respectively, and

Figure 5 shows a side section view along the line A-A of Figure 1 of the parts shown in Figures 1 to 4 assembled with the intermediate member clamped to the pole and the main housing held to the intermediate 85 member via the bayonet fitting which is secured by the securing member extending therethrough and held by a lip on the front cover locked to the main housing.

Referring now to the drawing, an elongate intermediate fixing member 1 has a flange 11 for extending across the top end of a pole 2 and a lower portion 12 which is adapted to extend into a hollow top portion 22 of the pole 2 and to be clamped to the inside of the pole 2. An upper portion of the intermediate 95 fixing member 1 is in the form of a first hollow cylinder 13 for extending through a hole 31 in the base 32 of the main housing 3 of a parking meter.

The lower portion 12 of the intermediate fixing member 1 has a taper away from the flange 11, with a 100 hole 16 extending through the flange 11 and the length of the lower portion 12 for locating a bolt 40 with its head 41 on top of the flange 11 and its shank protruding through the lower end of the lower portion 12, the first hollow cylinder 13 providing access to the 105 bolt head 41. A nut 42 for location on the protruding shank of the bolt 40 is punched out to locate three elliptical shaped leaves 43 (only one of which is shown in Figure 5) which extend up into the space between the taper of the lower portion 12 and the inside surface 110 22 of the pole 2. When the bolt 40 is tightened the leaves 43 are crammed by the taper into a narrowing space between the taper and the inside surface 22 of the pole 2 until the lower portion 12 is clamped to the pole 2.

115 The hollow cylindrical upper portion 13 of the intermediate fixing member 1 has two L-shaped slots 14 of a bayonet fitting. A pair of opposed holes 15 are provided in the cylindrical portion 13 above the closed lower ends of the slots 14.

120 The parking meter main housing 3 has a second hollow cylinder 33 which is formed integrally with the base 32, extends above and below the base 32 around the hole 31 and occupies a major portion of the width of the meter housing 3. The second cylinder 33 has

assembled into it below the base 32 a single bayonet pin 34 aligned with the length of the meter housing 3 and extending across the hole 31 for fitting in the bayonet slots 14 of the first cylinder 13. The pin 34 is

5 protected from removal after assembly by a web 331 formed integrally with and extending below the base 32 around the cylinder 33 at the front but not at the back of the pin 34. A pair of opposed openings are provided in second cylinder 33 above the base 32 and 10 aligned with the pin 34; the first opening of this pair is a hole 35 and the other opening is formed by two outwardly extending upper wall portions 36. A hollow cylindrical collar 332 is integral with and extends below the cylinder 33 coaxial with the cylinder 33.

15 The bayonet fitting is fastened by placing the main housing 3 over the intermediate member 1 with the second cylinder 33 surrounding the first cylinder 13 and the pin 34 in the top openings of the slots 14, and rotating the housing 3 until the pin 34 is in the closed 20 ends of the slots 14. In this fastened position a rubber ring 37 is compressed between the underneath of the cylinder 33 and the top of the flange 11, and the collar 332 surrounds the ring 37, the flange 11 and the top of the pole 2.

25 After the bayonet fitting is fastened, a securing pin 50 may be manually inserted from the open end 38 of the housing 3 to extend through the aligned openings 36, 15 and 35. A handle 51 on the securing pin 50 will then extend towards the open end 38 with one end 30 hanging down and resting on the base 32.

After the securing pin 51 has been inserted, an end cover 60 is positioned to close the open end 38 of the main housing 3. When in position, the end cover 60 has a base portion resting on the base 32 of the main 35 housing 3 with a lip 61 holding one end of the handle 51 so that the securing pin 50 cannot come out of the cylinders 13 and 33 and unfastening of the bayonet fitting is prevented.

The end cover 60 is lockable to the main housing 3 40 by means (not shown) extending between opposed inward projections 62, 39 near the top of the cover 60 and housing 3. Thus the securing pin 50 is manually removable by means of the handle 51 to permit the bayonet fitting to be unfastened and the main meter 45 housing 3 to be detached from the pole 2 only when the cover 60 is unlocked and removed.

The working parts of the parking meter are not shown but may be accommodated in the housing above the bayonet fitting and below the means for 50 locking the end cover 60. An entry slot 63 for a magnetic card token and a digital display area 64 may be positioned in the end cover 60 as shown.

CLAIMS

1. An arrangement for detachably holding a parking meter to the top of a pole, in which an intermediate fixing member has a lower portion for fixing to the pole and an upper portion in the form of a first hollow cylinder for extending through a hole in the base of the parking meter and having slots of a bayonet fitting, in 55 which the parking meter has a second hollow cylinder around said hole in the base for surrounding said first cylinder and having bayonet pin means for fitting in said holes, in which the two cylinders each have opposed openings which are aligned above the base 60

65 when the bayonet fitting is fastened such that a securing member can extend through the aligned openings, and in which a lockable cover of the meter has a portion for extending into the meter to hold the securing member so that the securing member is

70 manually removable to permit the bayonet fitting to be unfastened and the meter to be detached from the pole when the cover is unlocked and removed.

2. An arrangement as claimed in claim 1, in which the second cylinder occupies a major portion of the 75 width of the meter, said opposed openings being aligned along the length of the meter when the bayonet fitting is fastened, and in which a handle on the securing member extends towards one end of the meter to be held by the lockable cover which is an end 80 cover at that end.

3. An arrangement as claimed in claim 1 or claim 2 in which the intermediate fixing member has a flange between said upper and lower portions for extending across the top end of the pole, the lower portion being 85 adapted to extend into a hollow top portion of the pole and to be clamped to the inside of the pole.

4. An arrangement as claimed in claim 3, in which the lower portion of the intermediate fixing member has a taper away from the flange, with a hole 90 extending through the flange and the length of said lower portion for locating a bolt with its head on top of the flange and its shank protruding through the lower end of said lower portion, the first hollow cylinder providing access to the bolt head, and in which a nut is 95 provided for location on the protruding shank of the bolt and for locating leaves which extend up into the space between the taper and the inside surface of the pole, such that when the bolt is tightened the leaves are cammed by the taper into a narrowing space 100 between the taper and the inside surface of the pole until the taper is clamped to the pole.

5. An arrangement for detachably holding a parking meter to the top of a pole, substantially as herein described with reference to the accompanying 105 drawing.

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